

CLAIMS

1. A retardation film comprising an optically anisotropic layer and an optical retardation layer, the optical retardation layer comprising an aligned liquid crystalline compound,
5 wherein the optical retardation layer is laminated directly on the optically anisotropic layer.
2. The retardation film according to claim 1, wherein the optical retardation layer further comprises an aligned polymer.
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3. The retardation film according to claim 1, wherein the liquid crystalline compound has an alignment direction inclined with respect to a face direction of the optically anisotropic layer.
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4. The retardation film according to claim 1, wherein the liquid crystalline compound has an alignment direction varying depending on a position in the thickness direction of the optical retardation layer.
- 20 5. The retardation film according to claim 1, wherein a vector component in a face direction of the optically anisotropic layer, which composes a vector in the alignment direction of the liquid crystalline compound, crosses at right angles an optical axis of the optically anisotropic layer.
- 25 6. The retardation film according to claim 1, wherein the optical retardation layer has a positive uniaxial refractive index anisotropy.
7. The retardation film according to claim 1, wherein the liquid crystalline compound has a crosslinking structure.

8. The retardation film according to claim 1, wherein the liquid crystalline compound comprises a nematic liquid crystalline compound.
- 5 9. The retardation film according to claim 1, wherein the optically anisotropic layer has a negative uniaxial refractive index anisotropy.
- 10 10. The retardation film according to claim 1, wherein the optically anisotropic layer has a biaxial refractive index anisotropy.
- 11 11. The retardation film according to claim 1, wherein the optically anisotropic layer comprises a liquid crystalline compound.
12. The retardation film according to claim 1, wherein the optically anisotropic layer comprises polyimide.
- 15 13. The retardation film according to claim 1, wherein the optically anisotropic layer is formed on a transparent base.
14. An optical element comprising the retardation film according to claim 1
20 and a polarizer.
15. The optical element according to claim 14, further comprising a transparent protective film, and the transparent protective film is sandwiched between the retardation film and the polarizer.
- 25 16. The optical element according to claim 14, wherein the polarizer is a stretched polymer film.
17. The optical element according to claim 14, wherein the polarizer is a
30 polyvinyl alcohol-based polarizing film.

18. An image display apparatus comprising the retardation film according to claim 1 or the optical element according to claim 14.
- 5 19. A method for producing a retardation film, the method comprising steps of:
- applying a solution that contains a liquid crystalline compound and a polymer to react with polarized ultraviolet light, onto an optically anisotropic layer;
- 10 drying the solution so as to form a precursor layer of an optical retardation layer; and
- irradiating a surface of the precursor layer with polarized ultraviolet light.
- 15 20. The method for producing a retardation film according to claim 19, further comprising a step of crosslinking the liquid crystalline compound.
21. The method for producing a retardation film according to claim 19, further comprising a step of irradiating the surface of the precursor layer
- 20 with unpolarized ultraviolet light.
22. A method for producing an optical element, the method comprising steps of:
- preparing a retardation film produced according to the producing
- 25 method of claim 19 and a polarizer, and applying an adhesive onto at least either the retardation film or the polarizer;
- drying the adhesive; and
- bonding the retardation film and the polarizer via a surface applied with the adhesive.

23. A method for producing an optical element, the method comprising steps of:

preparing the retardation film produced according to the producing method of claim 19 and a polarizer having a transparent protective film

5 adhered, and applying an adhesive onto at least either the retardation film or the transparent protective film;

drying the adhesive; and

bonding the retardation film and the transparent protective film via a surface applied with the adhesive.